



Fig. 1: *Mystus cavasius* (Hamilton)

for *M. cavasius*, which is also reflected in Day's figure of this species. However, in the figure by Hamilton it works out to be 1.9 times. In the two specimens collected from Bangalore (both 120 mm SL) this proportion is quite different, being 2.25 and 2.34; and further, there is also a constriction of the body at the end of the adipose fin (Fig. 1). Though a slender caudal peduncle, 3 times in its length is characteristic of *horai*, this is found to be 1.8 times in the figure provided in the original description. It is also seen in this figure that apart from a notch-like constriction behind the adipose dorsal and vertically below along the ventral profile, the caudal peduncle rather appears to flare out gradually behind this point of constriction.

Another difference observed in the present specimens is its very slender shape. The body depth is 4.46 and 4.72 in

SL (vs. 4.3) and 6.15 and 6.29 in TL (vs. 5.5-6). Slight difference is observed in head length, being proportionately larger and length of fins relatively shorter. In other characters, the specimens agree with the description of *cavasius*. This species is said to attain a length of 18" (Day 1875-1878), whereas Hamilton remarks that it grows to 6" in the Ganges. Until larger specimens and more collections are studied, the present observation serves to extend the range of the proportion of the depth of caudal peduncle in its length to be 1.4 to 2.34 (earlier 1.4).

#### ACKNOWLEDGEMENTS

We are thankful to the Director, Zoological Survey of India, Kolkata and Officer-in-Charge, Southern Regional Station for providing necessary facilities. Our sincere thanks are due to Dr. K.C. Jayaram for the literature on *Sperata*.

December 18, 2002

K. REMA DEVI  
S. KRISHNAN

Zoological Survey of India,  
Southern Regional Station,  
100 Santhome High Road,  
Chennai 600 028, Tamil Nadu, India.

#### REFERENCES

- DAY, F. (1875-78): The Fishes of India being a natural history of the fishes known to inhabit the seas and freshwaters of India, Burma and Ceylon. Bernard Quaritch, London. xx + 778, 195 pls.
- FERRARIS, C. JR. & K.E. RUNGE (1999): Revision of the South Asian Bagrid Catfish Genus *Sperata*, with the description of a new species from Myanmar. *Proc. Calif. Acad. Sci.* 51(1): 397-424, 8, Figs. 7 tables.
- HAMILTON, F. (1822): An account of the fishes found in the river Ganges and its branches I-VII. Archibald, Edinburgh Hurst, Robinson & Co, London. 1-405, pls. 1-39.
- JAYARAM, K.C. (1999): The Freshwater Fishes of the Indian Region. Narendra Publishing House, New Delhi. 551 pp., Plates xviii.
- TALWAR, P.K. & A.G. JHINGRAN (1991): Inland fishes of India and adjacent countries. Oxford and IBH Publishing Co., Pvt. Ltd., New Delhi, xx + 1158 pp.

### 26. REDESCRIPTION OF *SPALGIS EPIUS* (WESTWOOD) (LEPIDOPTERA: LYCAENIDAE) WITH EMPHASIS ON MALE GENITALIA

#### Introduction

*Spalgis epius*, a very small blue Lycaenid butterfly commonly called Ape Fly (Aitken 1894) is found in tropical India. During a survey in different localities of Jorhat, Assam in northeast India, to evaluate pests infesting bamboos, *Spalgis epius* was reared on a colony of *Chaetococcus bambusae* (Homoptera: Pseudococcidae), a globular coccid. Several adults of both sexes were examined for morphological details. Past studies were incomplete and do not provide a proper identification guide (Evans 1932). Moreover, previous works do not emphasise the structural details of adult genitalia (Bingham 1905). Illustrations were also insufficient and therefore a redescription of *Spalgis epius* is given.

#### *Spalgis epius* (Westwood)

1852. *Lucia epius* Westwood, Green. Diurn. Lep., Vol. II, 502.

1852. *Geridus epeus* Doubleday & Hewitson, Gen. diurn. Lep. (2): 502.

1879. *Spalgis epius* Moore, Proc. Zool. Soc. Lond., p. 137.

1880. *Spalgis epius* Moore, Lep. Cey., Vol. I, p. 71.

1890. *Spalgis epius* Niceville, The Butterfly of India, Vol. III, p. 55.

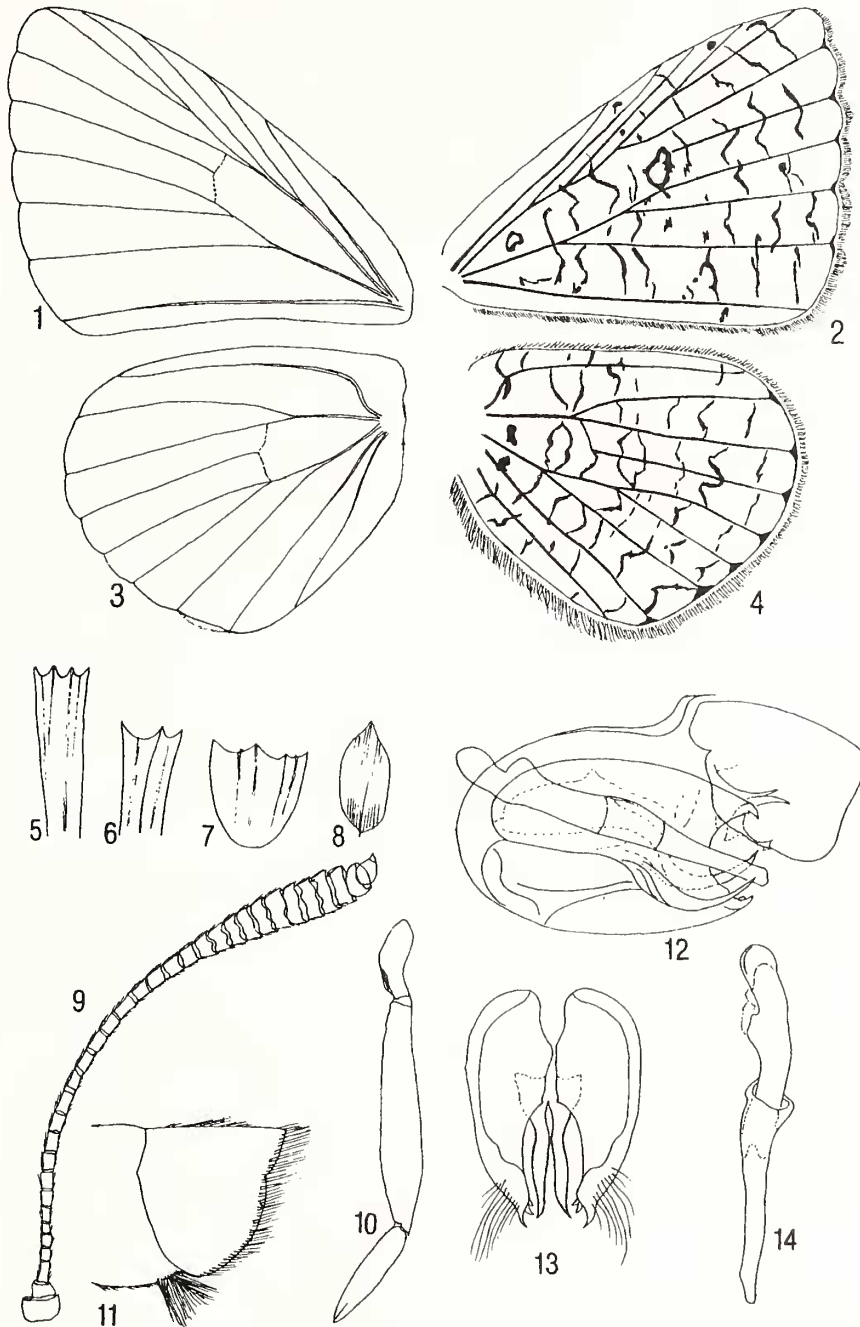
**General:** The Ape Fly is a small, slender, tailless Lycaenid butterfly with a dark brown upper side having a bluish tinge, and dull brown underside with wavy lines. There

is a prominent white spot on the forewing. Wing and colour of the butterfly are slightly different in male and female. Swift and erratic in flight, it settles with wings closed. It is generally found among herbs, shrubs, and among leaves and branches of small trees. Its wing span is 20 mm to 24 mm.

**Distribution:** This is an undistinguished and uncommon but not rare butterfly. Widely distributed in the plains, as well as known from the hills below 1219 m. Reported

from Kolkata (earlier Calcutta), Malda in West Bengal, Gangum (Orissa), Bangalore, Karanja, Nilgiri hills, Bombay, Travancore, Assam, Burma & Ceylon (Moore 1880; Niceville 1928).

**Seasonal occurrence:** At higher elevation, found during summer and rarely in October. In the plains it is found throughout the year. However, it is deemed active during winter (Wynter Blyth 1955).



Figs. 1-15: 1. Female forewing: scales removed; 2. Female forewing with scales and patterns; 3. Female hindwing: scales removed; 4. Female hind wing with scales and patterns; 5, 6, 7, 8 Various scales present on wing; 9. Antenna of female; 10. Palpi, 11. Abdominal tip of female; 12. Male genitalia lateral view, 13. Male genitalia dorsal view-aedeagus removed; 14. male aedeagus

**Head:** Eyes yellow, palpi long, slender, upturned, second joint projecting half of its length (Fig. 10). Antennae clavate, reddish-brown, apically rest of flagellum marked with silvery white with black and brown basal articulations (Fig. 9). Antenna with 32 annules, 20 mm in length. Proboscis coiled, prehensile and slender.

Frenulum absent. Thorax black, covered with short golden brown and grey hairs. Apical and hinder ends pubescent, having long greyish black hairs. Legs short, banded with brown, femora delicately pilose beneath, fore tarsi of male having minute spines at sides.

**Wing:** Forewing triangular, apex slightly acute in male, little rounded (Fig. 2). Upper surface of both wings violet brown. Male forewing bears a quadrate spot near end of cell. In female, white patch is broader and in discal area, with a dark brown or black lunule. Cilia white. Wings having four types of scales. (Figs 5, 6, 7, 8).

Under surface greyish white, with several irregular and broken brown lines. In males with an indistinct brown oval patch. Eyespot absent in both sexes. In females, white marking more pronounced. Hind wings do not possess any tail (Fig. 3).

**Wing venation:** Fore wing (Fig. 1) costal vein short, nearly reaches middle half of costal margin. Third radial bifid giving rise to R3 and R4+5. M1 emitted from upper end of discal cell. M2 starts from end of cell angle and not directly connected to stalk of radial vein. Median vein M3 starts from lower angle of cell and proximity of M3 to cubitals gives an impression of 3 branches of cubitals. Anal vein lies along inner margin of forewing.

Costa of hind wing (Fig. 3) not thickened. Humeral vein absent. Second costal nervure splits to only radial (R) and 1<sup>st</sup> Median vein. M2 originates from end of cell angle. M3 emitted from lower angle of cell. 1<sup>st</sup> cubital Cu1 bifurcates from M3 near lower angle of cell, Cu2 emitted just before it. Anal vein splits near base to form A1 and A2.

**Genitalia:** Male genitalia complex, formed by modified 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> abdominal segments (Figs 12, 13). 8<sup>th</sup> segment protractile. 9<sup>th</sup> segment as a sclerotic ring, formed of tegumen dorsally and vinculum ventrally. Tergum form a shelf over the 10<sup>th</sup> segment; vinculum arch-like, having a small rectangular plate termed saccus. 10<sup>th</sup> segment or uncus broad, square, having a pair of curved claws, termed gnathos. Uncus bears

no socii.

Pair of claspers or Herpes with large, curved, upturned and pointed claw. Herpes originates from a medial triangular plate that also provides articulation for penile musculature along theca.

Aedeagus, intromittant or phallic organ elongated, tubular, gradually narrowed down at blunt apex (Fig. 14) enclosed in a pouch-like endophallic tube that extends out from posterior part of genital complex. Tube having little sclerotization along its margin. Other end of tube enclosed by a floppy sheath, called theca with a rim called anellus. Tip of aedeagus lacks sclerotization. Herpes covers aedeagus from sides, and two plates, upper and lower valvula, cover whole structure. Upper tip of valvula projected like a short, pointed spine. Inner margin with spiny projections. Valvulae highly setose at tip.

Female genitalia slightly chitinized, rather simpler, having an evaginated outgrowth at tip of abdomen (Fig. 11).

**Material examined:** 5 females and 7 males collected from developing carnivorous larvae on colony of *Chaetococcus bambusae* infesting *Bambusa tulda* and *Bambusa balcooa* in Jorhat. 2 females and 2 males are kept in collection of Forest Protection Division, Rain Forest Research Institute, Jorhat, Assam (Collection No. B123). Adult female compared with a single female *Spalgis epius* in the collection of Forest Entomology Department, Forest Research Institute, Dehra Dun, Uttaranchal.

#### ACKNOWLEDGEMENTS

We are thankful to the Director, Rain Forest Research Institute, Jorhat, for laboratory facilities.

February 7, 2003

S. CHAKRABARTI<sup>1</sup>

D. GURUNG

Rain Forest Research Institute,  
Deovan, Jorhat, Assam, India.

<sup>1</sup>Present Address:

Himalayan Forest Research Institute,  
Conifer Campus, Shimla 171 009,  
Himachal Pradesh,  
India.

Email: tismus2001@yahoo.co.in

#### REFERENCES

- AITKEN, E.H. (1894): The larva and pupa of *Spalgis epius* Westwood. *J. Bombay Nat. Hist. Soc.* 8: 485-487.
- BINGHAM, C.T. (1905): Fauna of British India: Vol. 2 Butterflies. 1-528, Taylor & Francis, London.
- EVANS, W.H. (1932): Identification of Indian Butterflies. Bombay Natural History Society, Bombay. Pp. 454,
- NICEVILLE, L.D. (1928): The Butterflies of India, Burma and Ceylon. Vol. III, 1-503.
- MOORE, F. (1880): The Lepidoptera of Ceylon. L. Reeve & Co., London.
- WYNTER BLYTH, M.A. (1955): Butterflies of the Indian region. Bombay Natural History Society, Bombay. 253 pp.